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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/753,208

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Thomas E. Drake JR.

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12/29/2004

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EXAMINER

SAINT SURIN, JACQUES M

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/753,208

Applicant(s)

DRAKE, THOMAS E.

Examiner

Jacques M Saint-Surin

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2004 and 07 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-19 is/are allowed.
- 6) ☒ Claim(s) 1-8, 20 and 23 is/are rejected.
- 7) ☒ Claim(s) 21, 22, 24 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01/07/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said robot free standing" in line 4. There is insufficient antecedent basis for this limitation in the claim. It is not clear if there is a missing word (e.g., "is") where the limitation would be read as "said robot is free standing". Clarification and correction are required.

Claims 2-8 are rejected as being dependent from a rejected base claim.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Land (US Patent 6,043,877).

Land discloses an apparatus for intact testing of an object comprising, in combination means for scanning the intact object, said scanning means mounted on a robot, said robot free standing with respect to the object and comparison means to correlate data from the scanning means to a standard (a laser aligning system (LAS) in which a shadow image of the component is formed on a detector, for example a CCD sensor. The position data are applied to a signal-processing unit associated with the robot and compared in this unit with reference data, see: col. 2, lines 8-18).

4. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Schuster et al. (US Patent 5,124,524).

Regarding claim 1, Schuster et al. discloses an apparatus for intact testing of an object (22), comprising, in combination means (laser beam 26) for scanning the intact object (22), said scanning means mounted on a robot, said robot free standing with respect to the object (a laser mounting means adjustably secures a laser energy source with respect to the support member, see: col. 2, lines 2-4) and fully automated scanning of an object is achieved with the object either held stationary or rotated about a reference axis, see: col. 2, lines 61-64) and comparison means (computer 66, see: col. 5, lines 6-21) to correlate data from the scanning means to a standard.

Regarding claims 2-3 and 5-6, Schuster discloses means for positioning a laser beam parallel to any vector in three dimensional space, based on three mutually perpendicular axes of linear translation and two distinct rotational axes (see: col. 1, lines 50-53). Schuster further discloses FIG. 2 shows a three dimensional digitizing system 36 in which a laser probe head assembly 38 is supported for a linear translation along three mutually perpendicular axes including a horizontal X axis, a horizontal Y axis and a vertical Z axis, see: col. 4, lines 40-44.

Regarding claim 4, Schuster discloses the support means supporting the laser can be aligned to position the laser beam angularly to be perpendicular to the first rotational axis, and further aligned to linearly position the laser beam so that it intersects the first rotational axis see: col.2, lines 56-61.

Regarding claim 7, Schuster discloses the laser beam can be appropriately positioned and oriented with respect to virtually any point on the surface of any object, regardless of convolutions, irregularities and other complexities in the topography of the object. The enhanced laser positioning affords more accurate and reliable data representing the topography, leading to more accurate replication of the object in a scan-line pattern, see: col. 3, lines 29-37.

4. Claim 20 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Lorraine et al. (US Patent 5,801,312).

Regarding claim 20, Lorraine discloses a method for testing an object for present or potential defects (laser system 10 of Fig. 1), comprising: scanning the object with a sensor means (laser source 12) to generate data for the object (14); comparing the data

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for the object for correlation with reference data (processor 26), identifying any defects as a result of the comparison (detector 16), see col. 5, lines 35-60.

Regarding claim 23, Lorraine discloses the detected displacement at each scanning positions contain signals representing ultrasonic waveform data set corresponding to three-dimension volumetric region in the object, see: col. 2, lines 26-29.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster et al. (US Patent 5,124,524) in view of Lorraine et al. (US Patent 5,801,312).

Regarding claim 8, Schuster does not disclose said scanning means includes ultrasonics. Lorraine discloses the detected displacement at each scanning positions contain signals representing ultrasonic waveform data set corresponding to three-dimension volumetric region in the object, see: col. 2, lines 26-29. It would have been obvious to one of ordinary skill in the art at the time invention to utilize in Schuster the scanning means of Lorraine because it provides detected displacement at each scanning positions that contain signals representing ultrasonic waveform data set corresponding to three-dimension volumetric region in the object in an efficient manner.

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Allowable Subject Matter


7. Claims 9-19 are allowable over the prior art of record.
8. Claims 21-22 and 24-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacques M Saint-Surin whose telephone number is (571) 272-2206. The examiner can normally be reached on Increased Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jacques M. Saint-Surin
December 20, 2004


HEZRON WILLIAMS
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